

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

Claims 1 - 40 (cancelled)

41. (currently amended) A DC-DC converter comprising:

a comparator configured to compare a first signal representative of an output voltage of said DC-DC converter with a ~~second~~ periodic reference signal having a DC offset determined by a DC reference voltage source and to provide an output signal that drives said output voltage of said DC-DC converter towards a pre-established value.

42. (original) The DC-DC converter of claim 41, wherein said output signal comprises a pulse width modulated signal.

43. (original) The DC-DC converter of claim 42, wherein a pulse width of said pulse with modulated signal changes when said output voltage is different than said pre-established value.

44. (original) The DC-DC converter of claim 41, wherein said DC-DC further comprises a driver and a pair of switches, and wherein said driver drives said pair of switches, one high,

one low which alternatively control said output voltage in response to said output signal from said comparator.

45. (original) The DC-DC converter of claim 44, further comprising a low pass filter electrically coupled to an output of said pair of switches.

46. (original) The DC-DC converter of claim 45, wherein each of said switches comprises a metal oxide semiconductor field effect transistor.

47. (currently amended) A DC to DC converter comprising:  
a means for comparing a first signal representative of an output voltage of said DC-DC converter with a ~~second~~ periodic reference signal having a DC offset determined by a DC reference voltage source and providing an output signal that drives said output voltage of said DC-DC converter towards a pre-established value.

48. (original) The DC-DC converter of claim 47, wherein said output signal comprises a pulse width modulated signal.

49. (original) The DC-DC converter of claim 48, wherein a pulse width of said pulse with modulated signal changes when said output voltage is different than said pre-established value.

50. (currently amended) A method of controlling an output voltage of a DC to DC converter, said method comprising:

comparing a first signal representative of an output voltage of said DC-DC converter with a ~~second~~ periodic reference signal having a DC offset determined by a DC reference voltage source;

providing an output signal in response to said comparing ~~step~~ operation; and

driving an output voltage of said DC-DC converter towards a pre-established value in response to said output signal.

51. (original) The method of claim 50, wherein said output signal comprises a pulse width modulated signal.

52. (currently amended) An electronic device comprising:  
a DC-DC converter, said DC-DC converter comprising:

a comparator configured to compare a first signal representative of an output voltage with a ~~second~~ periodic reference signal having a DC offset determined by a DC reference voltage source and to provide an output signal that drives an output voltage of said DC-DC converter towards a pre-established value.

53. (original) The electronic device of claim 52, wherein said output voltage of said DC-DC converter is provided to a system load of said electronic device.

54. (original) The electronic device of claim 53, wherein said system load comprises a microprocessor.

55. (original) The electronic device of claim 52, wherein said output signal comprises a pulse width modulated signal.

56. (original) The electronic device of claim 55, wherein a pulse width of said pulse with modulated signal changes when said output voltage is different than said pre-established value.

57. (original) The electronic device of claim 52, wherein said DC-DC further comprises a driver and a pair of switches, and wherein said driver drives said pair of switches, one high, one low which alternatively control said output voltage in response to said output signal from said comparator.

58. (original) The electronic device of claim 57, further comprising a low pass filter electrically coupled to an output of said pair of switches.

59. (original) The DC-DC converter of claim 58, wherein each of said switches comprises a metal oxide semiconductor field effect transistor.